

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-58 are in this case.

Claims 1,3,6,7,9,10,14-18,23-30, 32, 35,36,39,43-47 and 52-58 have been rejected under 35 USC § 102 (b).

Claims 2,4,5,8,12,31,33,34,37 and 41 have been rejected under 35 USC § 103 (a).

Claims 1,2,10,30,31 and 39 have been objected to.

The Examiner has set forth a claim interpretation which is not in conformity with standard terminology and definitions thereof as employed by those of ordinary skill in the art.

Independent claims 1 and 30 and dependent claims 2,10,31 and 39 have been amended.

Dependent claims 29, 48 and 58 have been cancelled.

New claims 59 and 60 are entered.

The claims before the Examiner are directed toward a method and system for accelerating receipt of data in a client-to-client network.

Objections

The Examiner has objected to claims 1,2,10,30,31 and 39 for minor informalities.

Specifically, the Examiner request that these claims be presented in sentence form, as opposed to outline form. These claims are amended hereinabove to appear in sentence form. No new matter is introduced by these amendments.

Claim Interpretation

The Examiner has refused to acknowledge the fundamental difference between a client-to

-client network and other network types, such as the Internet which employs requests that specify a location for a requested data set. Those of ordinary skill in the art acknowledge that the Internet Engineering Task Force (IETF) is responsible for drafting of all standards related to Internet protocols. Standards determined by the IETF become accepted definitions for those of ordinary skill in the art.

A request for comments (RFC) by the IETF posted by the Ohio State University at [<http://www.cse.ohio-state.edu/cgi bin/rfc/rfc1738.html>] is attached to this response and marked as appendix A. This document, dated December 1994, was originally posted at [<http://www.ietf.org/rfc/rfc1738.txt?number=1738>] and clearly illustrates how standard Internet networks rely strictly on the use of URL's. As will be explained in greater detail hereinbelow, this limitation makes them conceptually very different from client-to-client networks.

The examiner's attention is specifically directed to p. 3.1 (Common Internet Scheme Syntax) of the RFC of Appendix A. It defines this scheme for all URLs used in the Internet: //<user>:<password>@<host>:<port>/<url-path>. This is especially true for WEB URLs. US 6,240,461 B1 (hereinafter Cieslak) specifically mentions URL-based caching (col. 4, lines 58- 60):

"The caching engine determines if it has the requested object stored locally (step 216) by comparing the packet URL to its directory."

As will be detailed hereinbelow, such a teaching is against what is instantly claimed and no such URL scheme is possible in a client-to-client network because there is no <host>:<port> part of the request or response. Client-to-client networks are completely decentralized, so that

searches for a specific item do not designate a specific host or location.

Cieslak claims (claim 1):

“... and transmitting data corresponding to the first data request from the first cache platform to the source platform, the data indicating origination from the destination platform.”

In client-to-client networks nothing in the data indicates it's origination in the destination platform, as this destination platform is just a randomly chosen peer. Further, in client-to-client network many such “destination platforms” may exist and are preferably employed simultaneously, or sequentially, or a combination thereof, with regard to a single requested data set.

Thus, Cieslak’s teachings are not directed towards client-to-client network caching and would not function in such a context if an attempt to implement them in such a context were made.

The applicant respectfully, but strongly, asserts that the Examiner’s claim definition is not in conformity with standards commonly employed by those of ordinary skill in the art.

The Examiner’s Claim Interpretation is traversed.

§ 102(b) Rejections - Cieslak

The Examiner has rejected claims 1,3,6,7,9,10,14-18,23-30, 32, 35,36,39,43-47 and 52-58 under 35 USC § 102 (b) as being anticipated by Cieslak (US 6,240,461).

The objective of Cieslak is caching of intercepted requests where each request is defined by a destination platform. Designation of the destination platform limits the response to a single item from a defined source. The defined source is indicated by a URL. It is relevant to this response that the “U” in URL indicates unique.

By contrast, the device of the present invention is directed towards retrieval of a requested data set without designation of a location where the data set is to be found.

While continuing to traverse the Examiner's rejections, Applicant has, in order to expedite the prosecution, chosen to amend independent claims 1 and 30 in order to clarify and emphasize the crucial distinctions between the device of the present invention and the teachings of Cieslak cited by the Examiner. Specifically, claims 1 and 30 have been amended to clarify that:

"said storing said intercepted responses in said acceleration server includes storing a single intercepted response which originates in at least two separate and distinct clients, " and
"analyzing a direction of said intercepted responses in accordance with a caching policy; " and
"allowing transmission of a specific intercepted response to a client submitting a specific intercepted query only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client and denying transmission of said specific intercepted response in all other cases".

Support for these amendments can be found in claims 29, 48 and 58 (now cancelled) and in the specification as originally filed:

(page 13, line26 to page 14, line 5) "...the step of transmitting **26** an intercepted response to a client submitting a specific intercepted query occurs only if a specific client which contains data equivalent to the specific intercepted response in a directory of the specific client is available on the client-to-client network. If the equivalent data is available, transmission occurs **26**. If it is not available, no transmission occurs **40**. The same principle may be applied to packets. If an equivalent packet is available, transmission occurs **26**. If it is not available, no transmission occurs **40**. "

(page 15, lines 21-28) "Similarly, acceleration server **52** may be configured to be either unidirectional or bi-directional. This means that, for example, acceleration server **52** of server **57k** may be configured to transmit stored responses only to members of LAN **54b**, in which case it is said to be a unidirectional acceleration server **52**. Alternately acceleration server **52** of server **57k** may be configured to transmit stored responses in response to queries from inside LAN **54b** and from clients **57** outside LAN **54b** in which case it is said to be a bi-directional acceleration server **52**."

(page 14, lines 10-13) "In some cases, the step of storing **24** the intercepted responses in an acceleration server may include storing **24** a single intercepted response which originates in at least two separate and distinct clients. For example, client **57a** requests an accapella rendition of "Hatikva" by the Ramallah boys' choir as an MP3 file. The requested

file is found on both clients **57b** and **57c**. The file is divided into ten packets, with packets 1,3,5,7 and 9 being sent to acceleration server **52** of server **60** by client **57b**, and packets 2,4,6,8 and 10 being sent to acceleration server **52** of server **60** by client **57c**.”

Amended independent claims 1 and 30 now feature language which makes it absolutely clear Cieslak does not anticipate, hint or suggest what is claimed. In fact Cieslak teaches against what is instantly claimed. . Applicant believes that the amendment of the claims completely overcomes the Examiner's rejections on §102(b) grounds.

Specifically, the Examiner has asserted that the acceleration server is merely a proxy server. The examiner has cited Cieslak (column 2; lines 29-67; emphases added) against claims 1 and 30:

“According to the present invention, methods and apparatus are provided which facilitate the transmission of data between platforms interconnected by any of a variety of network environments. Essentially, the present invention represents an improvement over the proxy server model which is transparent to end users, high performance, and fault tolerant. By altering the operating system code of an existing router (such as those available from Cisco Systems Inc.), the router is enabled to redirect data traffic of a particular protocol intended for a specified port, e.g., TCP with port 80, to one or more caching engines connected to the router via an interface having sufficient bandwidth such as, for example, a 100 baseT interface. If there are multiple caching engines connected to the cache-enabled router, the router selects from among the available caching engines for a particular request based on a simple algorithm according to which a particular group or "bucket" of addresses is associated with each caching engine.

The caching engine to which the request is re-routed "spoofs" the requested destination platform and accepts the request on its behalf via a standard TCP connection established by the cache-enable router. If the requested information is already stored in the caching engine it is transmitted to the requesting platform with a header indicating its source as the destination platform. If the requested information is not in the caching engine, the caching engine opens a direct TCP connection with the destination platform, downloads the information, stores it for future use, and transmits it to the requesting platform. All of this is transparent to the user at the requesting platform which operates exactly as if it were communicating with the destination platform. Thus, the need for configuring the requesting platform to suit a particular proxy configuration is eliminated along with the associated overhead. Moreover, traffic may be easily allocated among as many caching engines as become necessary.

Thus, the present invention provides a method for facilitating data transmission in a network. A first data request is received at a first intermediate platform, the first data request indicating a source platform and a destination platform. The first data request is redirected by the first intermediate platform to a first cache platform associated with the intermediate platform. Data corresponding to the first data request is

transmitted from the first cache platform to the source platform. The data indicates origination from the destination platform.”

In this passage, Cieslak admits the existence of proxy servers. Nonetheless, it was proper to issue a patent because the teachings of Cieslak were “non-obvious” with respect to what was previously known in the art. Ergo, the claims currently pending may still be novel and non obvious, despite the previous existence of proxy servers, including the proxy server described by Cieslak.

With regard to Cieslak, his assertion that his invention “... facilitate the transmission of data between platforms interconnected by any of a variety of network environment...” clearly does not include client-to-client networks. That is because Cieslak teaches use of a requested destination platform as a means of specifying the requested information. In other words Cieslak teaches that a user must know the location of a desired data set in order to retrieve it. Client-to-client networks rely on the premise that a description of a data set in terms of temporal information, ordinal information, frequency information, client information and identification information. There is no teaching in the instant application of designating a specific location from which to retrieve data, and such a designation would be incompatible with claims 1 and 30 as currently amended. Conversely, Cieslak does not teach, hint or suggest that it is feasible to retrieve an item from an unknown location.

The Examiner’s assertion [item 22;page 6 of the pending office action] that Column 2; lines 45-67 of Cieslak teach “..wherein a specific response of said intercepted responses stored in an acceleration server has its origins in at least two separate and distinct clients.” Is erroneous on its face. In point of fact, Cieslak teaches against this possibility in Column 2; lines 45-67 as detailed hereinabove.

All 102(b) rejections based on Cieslak are traversed.

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§ 103(a) Rejections – Cieslak and others

The Examiner has rejected claims 2,4,5,8,12,31,33,34,37 and under 35 USC § 103 (a) as being obvious with respect to Cieslak.

Claim 13 is rejected under 35 USC § 103 (a).as being obvious with respect to Cieslak in view of US 6, 286,084 (hereinafter Wexler).

Claims 11, 14, 19-22 and 48-51 are rejected under 35 USC § 103 (a) as being obvious with respect to Cieslak in view of US 5,884,046 (hereinafter Antonov)

Without offering any additional arguments, claims 2,4,5,8,12 are in condition for allowance based upon their dependence from claim 1 as currently amended.

Without offering any additional arguments, claims 31,33,34,37 are in condition for allowance based upon their dependence from claim 30 as currently amended.

As argued in detail hereinabove, Cieslak teaches against what is claimed. Therefore, the claimed invention cannot be obvious in light of Cieslak.,

All 103(a) rejections based on Cieslak are traversed.

With respect to claim 13, Cieslak teaches against what is claimed. Therefore, one of ordinary skill in the art would find no motivation in Cieslak to combine Cieslak's teachings with Wexler. If such an attempt at combination were made, it would still not produce that which is claimed.

All 103(a) rejections based on Cieslak in view of Wexler are traversed.

With respect to claims 11, 14, 19-22 and 48-51 Cieslak teaches against what is claimed. Therefore, one of ordinary skill in the art would find no motivation in Cieslak to combine Cieslak's teachings with Antonov. If such an attempt at combination were made, it would still not produce that which is claimed.

All 103(a) rejections based on Cieslak in view of Antonov are traversed.

All 103(a) rejections based on Cieslak in view of others are traversed..

All 103(a) rejections are traversed.

All rejections are traversed.

§ new claims

New claims 59 and 60 are entered. These claims contain limits previously found in claims 1, 10, 15, 29, 30, 48 and 58 and in the specification as originally filed (page 11, line 29 to page 12, line, 2; page 13, line26 to page 14, line 5; page 15, lines 21-28 and page 14, lines 10-13). As a result, no new matter is introduced by these claims.

Claims 59 and 60 each include the limit “...wherein said queries and said responses each independently contain identification information including at least one datum selected from the group consisting of file identification, and identification of content within a file.”

This limit specifies the format in which requests, and responses are identified, and specifically excludes the use of URL's.

Therefore a request for an item of content, as defined in claims 59 and 60, a “could not be processed according to the teachings of Cieslak.

Further, if one tried to implement the teachings of Cieslak in a client-to-client network by substituting a client address (e.g. IP address) for the “URL” all responses from a single client would be perceived as the same content. This would lead to retrieval of irrelevant content in many cases.

Further, if one tried to implement the teachings of Cieslak in a client-to-client network by employing a client address and a content ID in lieu of a “URL” the acceleration server would function very inefficiently because it will store pieces of the same content (response) coming from different clients as different responses. Clearly, this would not permit the acceleration which is the reason for implementing the claimed system/method.

New claims 59 and 60 are free of the prior art of record.

§ additional art

US 5,852,717 issued to Bhide et al. relates specifically to http requests which rely upon URL's. Thus, Bhide, like Cieslak teaches against what is claimed.

US 6,434,608 issued to Desai relates specifically to TCP requests which specify a destination location. Thus, Desai, like Cieslak teaches against what is claimed.

US 5,950,205 issued to Aviani, Jr. deals with keeping a cache memory full. It does not relate to acceleration of responses to requests by interception of requests as instantly claimed.

In view of the above amendments and remarks it is respectfully submitted that independent claims 1 and 30, and hence dependent claims 2-28, 30-47 and 49-57 are in condition for allowance. New independent claims 59 and 60 are free of the prior art of record. Prompt notice of allowance is earnestly and respectfully solicited.

Respectfully submitted,

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